

10/551988

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

22 JUN 2006

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>0000054443</b>	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/003624</b>	International filing date (day/month/year) <b>06.04.2004</b>	Priority date (day/month/year) <b>08.04.2003</b>	
International Patent Classification (IPC) or national classification and IPC			
<p>Applicant <b>BASF AKTIENGESELLSCHAFT</b></p>			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <b>5</b> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <b>8</b> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																								
<p>4. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003624

## Box No. I

## Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- international search (Rule 12.3 and 23.1(b))
  - publication of the international application (Rule 12.4)
  - international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- the international application as originally filed/furnished  
 the description:

pages 1-127 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the claims:

nos. \_\_\_\_\_ as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19  
04.12.2004 with letter  
 nos.\* 1-15 received by this Authority on of 03.12.2004

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the drawings:

sheets \_\_\_\_\_ as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

- the description, pages \_\_\_\_\_
- the claims, nos. \_\_\_\_\_
- the drawings, sheets/figs \_\_\_\_\_
- the sequence listing (*specify*): \_\_\_\_\_
- any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages \_\_\_\_\_
- the claims, nos. \_\_\_\_\_
- the drawings, sheets/figs \_\_\_\_\_
- the sequence listing (*specify*): \_\_\_\_\_
- any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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## 1. Statement

Novelty (N)	Claims	1-15	YES
	Claims		NO
Inventive step (IS)	Claims	1-15	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

## 1. Prior art

The following documents cited in the search report were taken into account during examination:

- D1: US-A-5 169 430 (STRUNK RICHARD J ET AL), 8 December 1992 (1992-12-08)
- D2: EP-A-0 361 114 (NIHON NOHYAKU CO LTD), 4 April 1990 (1990-04-04)
- D3: DATABASE CHEMABS [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; YOSHIOKA, YASUHIRO: "Heat-developable photographic films containing specific hydrazine and specific heterocyclic compound", XP002289556, found in the STN Database, accession no. 2002:959013
- D4: WO 97/00246 A (CIBA GEIGY AG; BRUNNER HANS GEORG (CH); KARVAS MILAN (SK); NEBEL KURT), 3 January 1997 (1997-01-03)
- D5: DATABASE CAOLD CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; XP002289557
- D6: WO 97/42176 A (BAYER AG; ANDREE ROLAND (DE); DREWES MARK WILHELM (DE); DOLLINGER MAR), 13

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November 1997 (1997-11-13)

D7: US-A-4 369 058 (LEVITT GEORGE), 18 January  
1983 (1983-01-18)

**2. Novelty**

The subject matter of claim 1 meets the requirements of PCT Article 33(2). The generic wording of claim 1 of the present application differs from the disclosure in documents D1-D5 by the variable Y, and differs from D6 by the chlorine definition at the ortho position with respect to the sulfonyl unit.

The present compounds as per claim 8 differ from the compounds in D7 by at least the variable Q (cf. claim 1 in D7, variable R2; and column 10, compounds II-B). The process claim 7 is therefore also novel.

**3. Inventive step**

The present application meets the requirements of PCT Article 33(3).

The present application can be considered to address the problem of providing further benzosulfonamide derivatives with improved herbicidal properties.

D1 is regarded as the closest prior art. D1 differs from the present compounds, as indicated

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

in the paragraph about novelty. The compounds disclosed therein possess herbicidal properties. Owing to the minor structural variation, a person skilled in the art would expect the herbicidal properties of the present compounds.

However, the applicant could demonstrate, on the basis of a comparative test, that the presently claimed compounds possess surprisingly improved properties.

The above-mentioned problem has therefore been solved. The breadth of the claims represents a plausible generalisation of the tested examples.

The intermediate products make a structural contribution to the final products.

An inventive step can therefore be recognised.